

Appl. No. : 09/832,786
Filed : April 11, 2001

REMARKS

Claims 1 and 11 have been amended to add the limitation of rating complementarity of the combinatorial library based at least in part on the relative number of ligands that are in the largest cluster. Support for these amendments may be found in the specification, for example, in paragraphs 20, 66, 87, and Table 7 (see also the Written Description discussion below). Claim 2 has been amended to correct a grammatical error. Claims 1-5 and 11-17 are pending in the application. The Applicants have carefully considered all of the Examiner's rejections but respectfully submit that the claims are allowable for at least the following reasons.

Objection to 7/5/05 Amendment

The Examiner noted that in the Applicants' 7/5/05 Amendment, Claim 12 had been indicated as being "previously presented" but nonetheless contained strike-through text. Clarification and correction was requested. The strike-through text in question originated from a deletion in Applicants' prior 10/21/04 Amendment and was left in the 7/5/05 listing of Claim 12 by mistake. The strike-through text has been removed in the current listing of Claim 12 above and the claim is properly indicated as "previously presented." The current version of Claim 12 was previously presented in the 10/21/04 Amendment.

Rejections under § 112 – Written Description

The Examiner rejected Claims 16 and 17 under 35 U.S.C. § 112, ¶ 1 for lack of written description support in the specification. The Examiner argued that counting the number of ligands in at least one cluster is not described in the specification. The Applicants respectfully disagree. Paragraph 21 of the specification states that, after the data is organized via cluster analysis, "the library is ranked according to the relative number of ligands in the top cluster." Similarly, paragraph 66, teaches that "[t]he relative number of compounds in the library in the top cluster is a measure of the library's complementarity to the target molecule, and is used to rank the library." Paragraph 87 describes a specific example where "[t]he percentage of compounds from the library in the top cluster was used to rank the library" and Table 7 provides "cluster sizes" in terms of "fractions of the entire library." It would be clear to one of ordinary

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skill in the art that counting ligands in a cluster is an inherent part of determining the relative number of ligands in the cluster or determining cluster sizes in terms of percentage or fraction of an entire library. Written description support may be provided by implicit or inherent disclosure. *See e.g.*, M.P.E.P. §§ 2163(I)(B) and § 2163.07(a) (“there is no *in haec verba* requirement”—claim limitations may “be supported in the specification through express, implicit, or inherent disclosure.”). It is implicit and inherent that determining the relative number of ligands in a cluster requires counting them. Accordingly, the Applicants respectfully submit that Claims 16 and 17 have written description support in the specification.

In addition, Claims 1 and 11 now recite rating complementarity of the combinatorial library based at least in part on the relative number of ligands that are in the largest cluster. The portions of the specification recited above provide explicit written description support for these limitations.

Rejections under § 103

The Examiner rejected Claims 1-3, 5, 11-13, and 15 under 35 U.S.C. § 103(a) as being obvious over Ho et al. (1994) in view of Rarey et al. (J. Mo. Biol., 1996). Claims 4 and 14 were rejected under 35 U.S.C. § 103(a) as being obvious over Ho et al. (1994) in view of Rarey et al. (J. Mol. Biol., 1996) in further view of Aldenderfer et al. (1984). The Applicants respectfully maintain that that neither Rarey, Ho, nor Aldenderfer disclose forming clusters of multiple ligands. However, in order to advance prosecution, the Applicants have amended independent Claims 1 and 11 to require rating complementarity of the combinatorial library based at least in part on the relative number of ligands that are in the largest cluster.

The Examiner argues that Rarey discloses cluster formation in the context of clusters of different placements of selected fragments of a single ligand. However, Rarey does not teach or suggest rating complementarity of a combinatorial library based at least in part on the relative number of ligands that are in the largest cluster. In fact, such a determination would be nonsensical in Rarey because each cluster referred to contains only one ligand. Neither Ho nor Aldenderfer teach or suggest the limitation missing from Rarey. Accordingly, the Applicants respectfully submit that Claims 1-5 and 11-15 are not obvious over the cited art. The Applicants

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also note that the Examiner did not reject Claims 16 and 17 in view of the cited art. These claims recite counting the number of ligands in a cluster and rating complementarity of the combinatorial library based at least in part on the count.

CONCLUSION

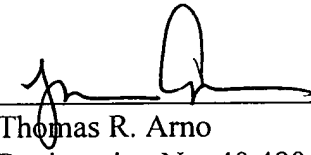
The Applicants respectfully submit that the foregoing amendments and arguments have overcome the pending rejections. Furthermore, the Applicants respectfully submit that the present amendments require only a cursory review by the Examiner and that their entry is therefore appropriate. *See* M.P.E.P. § 714.13. A timely issuance of a Notice of Allowance is respectfully requested.

Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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